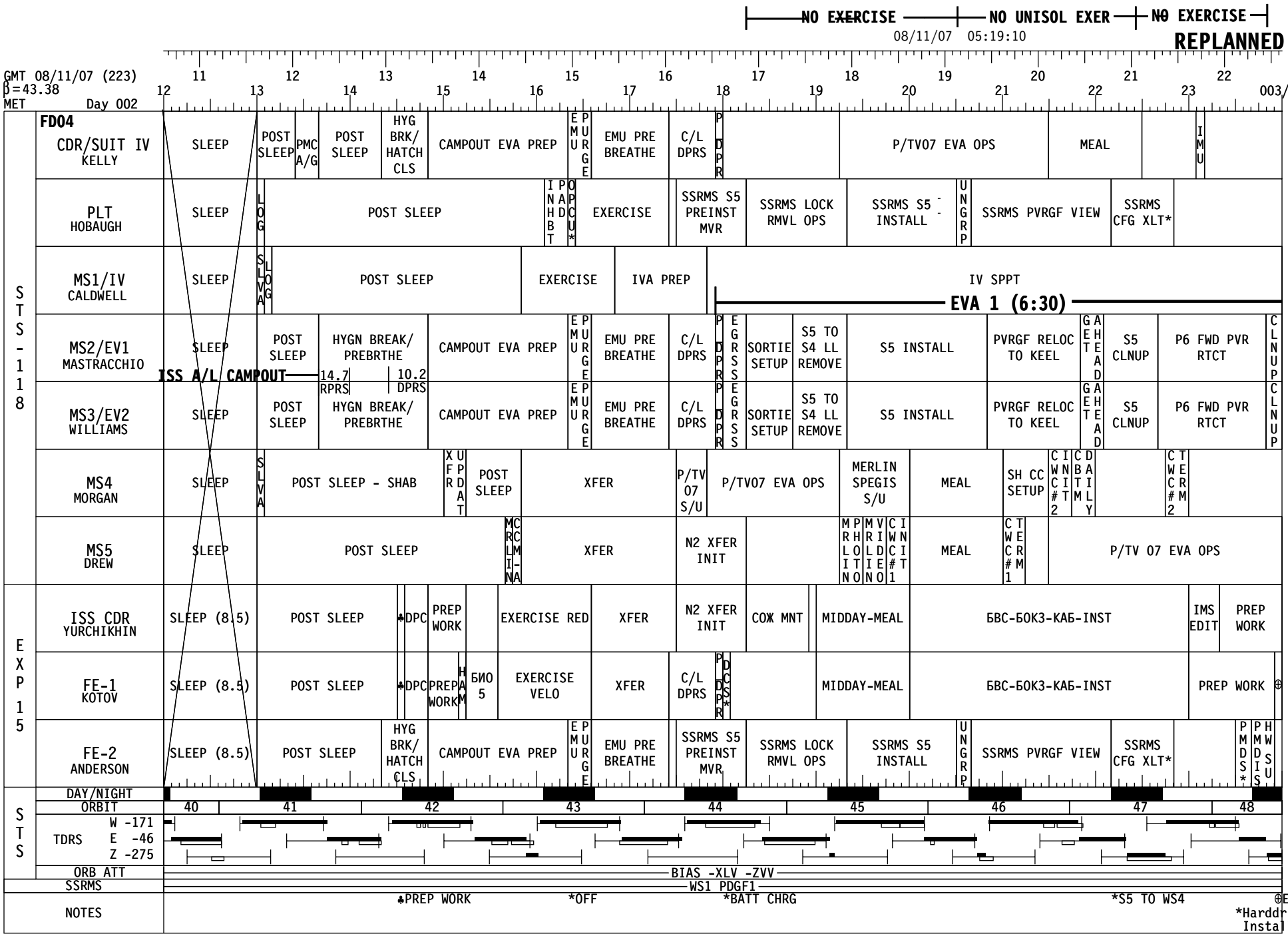
STS-118 / 13A.1

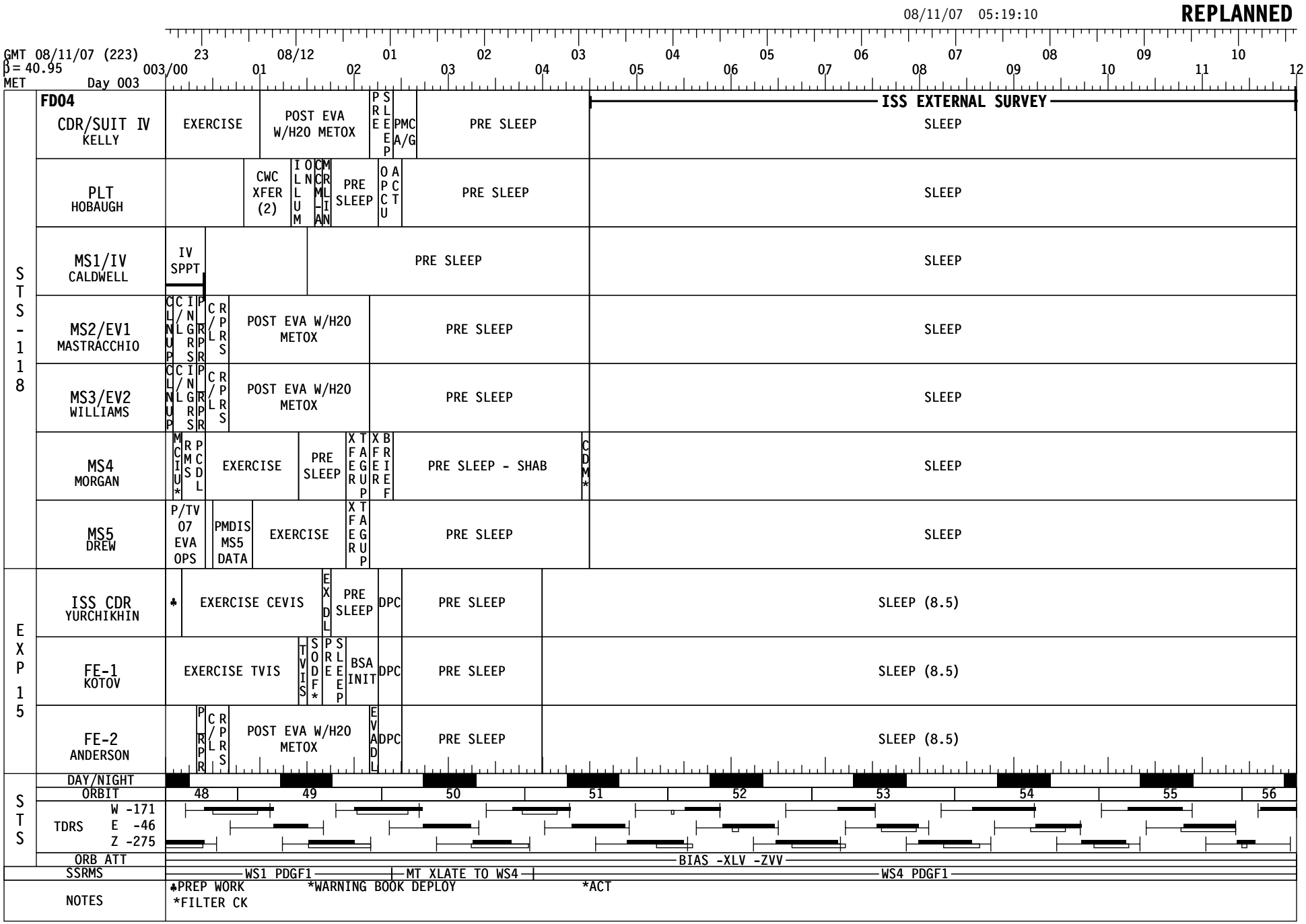
FD 04 Execute Package

MSG	Page(s)	Title
027	1 - 2	FD04 Summary Timeline **(pdf)**
028A	3 - 14	FD04 Flight Plan Revision **(pdf)**
029	15 - 16	FD04 Mission Summary **(pdf)**
030	17 - 19	FD04 Transfer Message **(pdf)**
031A	---	FD03 MMT Summary **(pdf - Electronic Only)**
032	20	O2 TANK 2 Manual Heater Operation **(pdf)**
033	21 - 28	New EMU Water Recharge Procedure **(pdf)**
026	29	Execute Package Sneakernet from ISS SSCs **(pdf)**

Approved by FAO: *Jaime Marshik*

Last Updated: Aug 11 2007 9:07AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*


NO EXERCISE
NO UNISOL EXER
NO EXERCISE
08/11/07 05:19:10
REPLANNED
GMT 08/11/07 (223)
β=43.38
MET Day 002
003/00
STS-118
EXP 15
STS
FD04
CDR/SUIT IV KELLY
PLT HOBAUGH
MS1/IV CALDWELL
MS2/EV1 MASTRACCHIO
MS3/EV2 WILLIAMS
MS4 MORGAN
MS5 DREW
ISS CDR YURCHIKHIN
FE-1 KOTOV
FE-2 ANDERSON
ISS A/L CAMPOUT
14.7 RPRS
10.2 DPRS
EVA 1 (6:30)
DAY/NIGHT
ORBIT
TDRS W -171 E -46 Z -275
ORB ATT
BIAS -XLV -ZVV
SSRMS
WS1 PDGF1
NOTES
♣PREP WORK
*OFF
*BATT CHRG
*S5 TO WS4
⊕EXERCISE
*Harddrive Install



08/11/07 05:19:10 **REPLANNED**

GMT 08/11/07 (223) 23 08/12 01 02 03 04 05 06 07 08 09 10
β = 40.95 003/00 01 02 03 04 05 06 07 08 09 10 11 12
MET Day 003

FD04

ISS EXTERNAL SURVEY

STS-118	CDR/SUIT IV KELLY	EXERCISE; POST EVA W/H20 METOX; PRE SLEEP; PMC A/G; PRE SLEEP	SLEEP
STS-118	PLT HOBAUGH	CWC XFER (2); ILLUM; ONCMLMA; CMRLIN; PRE SLEEP; OPCU; ACT; PRE SLEEP	SLEEP
STS-118	MS1/IV CALDWELL	IV SPPT; PRE SLEEP	SLEEP
STS-118	MS2/EV1 MASTRACCHIO	CLNUP; C/L; INGRS; RPR; C/L; RPRS; POST EVA W/H20 METOX; PRE SLEEP	SLEEP
STS-118	MS3/EV2 WILLIAMS	CLNUP; C/L; INGRS; RPR; C/L; RPRS; POST EVA W/H20 METOX; PRE SLEEP	SLEEP
STS-118	MS4 MORGAN	MCIU*; RMS; PCDL; EXERCISE; PRE SLEEP; XFER; TAGUP; XFER; BRIEF; PRE SLEEP - SHAB; CDM*	SLEEP
STS-118	MS5 DREW	P/TV 07 EVA OPS; PMDIS MS5 DATA; EXERCISE; XFER; TAGUP; PRE SLEEP	SLEEP
EXP 15	ISS CDR YURCHIKHIN	♣; EXERCISE CEVIS; EXDL; PRE SLEEP; DPC; PRE SLEEP	SLEEP (8.5)
EXP 15	FE-1 KOTOV	EXERCISE TVIS; TVIS; SODF*; PRE SLEEP; BSA INIT; DPC; PRE SLEEP	SLEEP (8.5)
EXP 15	FE-2 ANDERSON	PRPR; C/L; RPRS; POST EVA W/H20 METOX; EVADL; DPC; PRE SLEEP	SLEEP (8.5)

STS

DAY/NIGHT

ORBIT 48 49 50 51 52 53 54 55 56

TDRS W -171 E -46 Z -275

ORB ATT BIAS -XLV -ZVV

SSRMS WS1 PDGF1 | MT XLATE TO WS4 | WS4 PDGF1

NOTES
♣PREP WORK
*FILTER CK
*WARNING BOOK DEPLOY
*ACT

MSG INDEX

MSG NO.	TITLE
026	Execute Package Sneakernet from ISS SSCs
027	FD04 Summary Timeline
028	FD04 Flight Plan Revision
029	FD04 Mission Summary
030	FD04 Transfer Message
031	FD03 MMT Summary (Electronic Only)
032	O2 TANK 2 Manual Heater Operation
033	New EMU Water Recharge Procedure

1. Today's cryo config will start off with O2 tanks 1 and 4, and H2 tanks 2 and 4 in service with dual heaters. Following the start of EVA1, we will make a call to perform manual heater ops with O2 tank 2 per EPS SSR-201.

   R1 CRYO O2 MANF VLV TK1 - OP (tb-OP)
   H2 MANF VLV TK2 - OP (tb-OP)

2. The table below summarizes the Shuttle and ISS exercise constraints for today. These constraints are also noted in your timelines for your reference.

Activity	Exercise Constraints	
	Shuttle	ISS
S5 INSTALL	No exercise from S5 MANEUVER TO LOCK LAUNCH REMOVAL until 4 SOFT DOCKS ENGAGED	No exercise from S5 MANEUVER TO LOCK LAUNCH REMOVAL until 4 SOFT DOCKS ENGAGED
EVA 1	No exercise during EVA	No unisolated exercise during EVA
PVR RETRACT	No exercise while PVR is being retracted (EVA or motor driven)	No exercise while PVR is being retracted (EVA or motor driven)

3. As discussed prior to flight, the Minicam can exceed the touch temperature limit during operation. Recently received data indicates that after being shut down, allowing the camera to cool for 30 minutes prior to being handled will ensure that it is below the maximum touch temperature limit.

4. In order to deconflict SSRMS motion and P6 forward radiator retraction, the maneuver to the MT translation position has been moved up slightly in the timeline. It can be executed as soon as the EV crew have completed the PVRGF relocation and given you a go to do so. If the SSRMS is in motion when the EV crew and ground are ready to retract the PVR, we will ask you to pause until the PVR retract is complete.

   We have one correction to robotics procedure 2.100 S5 Soft Dock Acquisition, at the end of the procedure:
   WAS
   Go to {1.120 SSRMS S5 INSTALL}, steps 8 and 9 (SODF: RBT FS: S5).
   IS
   Go to {1.120 SSRMS S5 INSTALL}, steps 7-9 (SODF: RBT FS: S5).

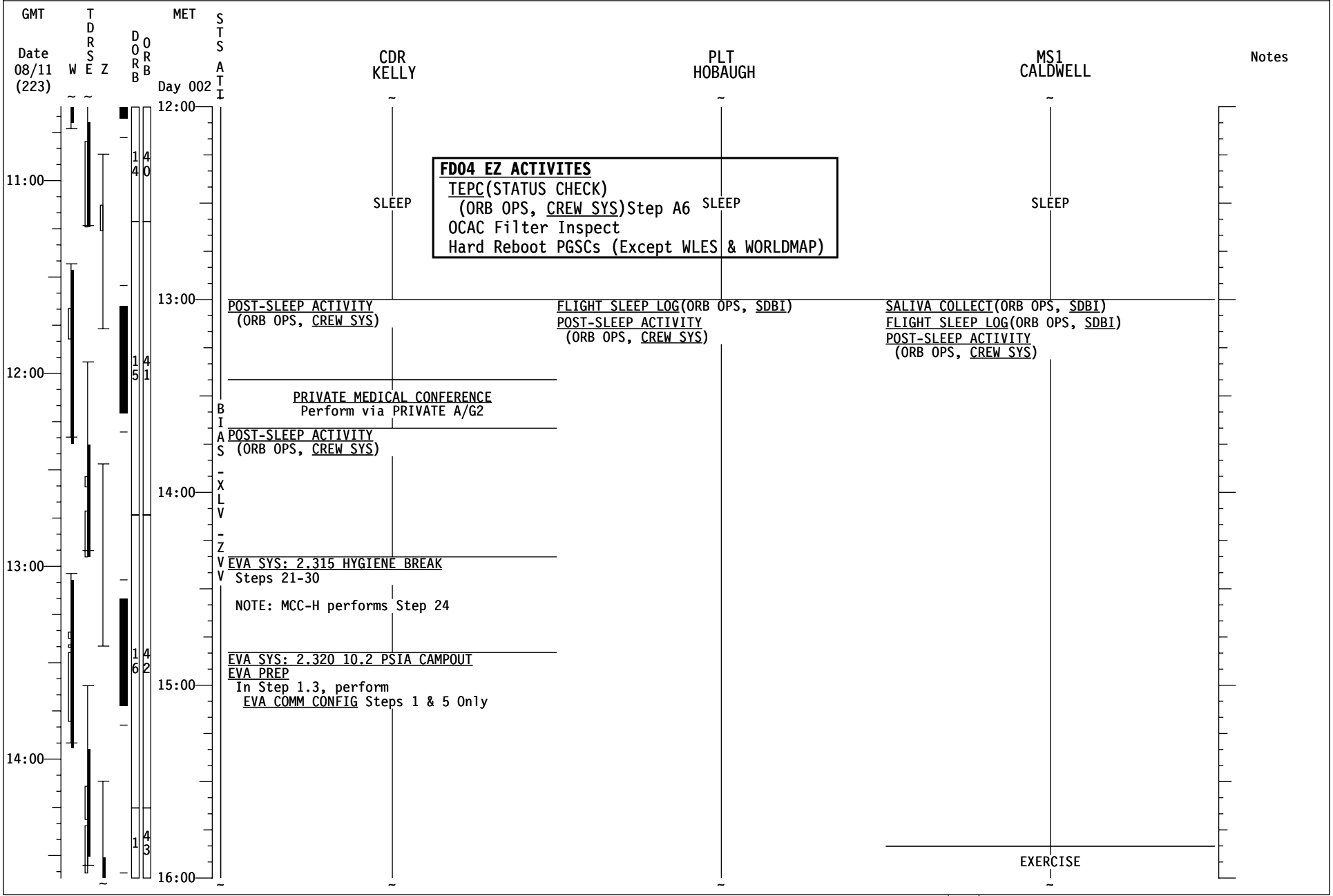
5. There are no SPACEHAB viewport violations for FD04.

6. In the event of a Loss of ISS Attitude control during the S-5 Install or MT-Translate activities today, the robotics activities should be completed prior to regaining attitude control. If a Loss of ISS Attitude Control were to occur, attitude control would be regained using Russian Thrusters rather than handing over control to the Orbiter due to the proximity to crew sleep.

7. We have uplinked two QuickTime videos of the debris impact on the Orbiter wing to the ISS SSCs. The files are located in U:\Temp\STS-118_Tile_Spray_Videos.

8. REPLACE PAGES 2-10, 2-12, AND 3-32 THROUGH 3-41.

STS-118 FD04



GMT Date 08/11 (223) | W | TDRSE | Z | DORB | ORB | MET Day 002 | STS ATI | CDR KELLY | PLT HOBAUGH | MS1 CALDWELL | Notes

FD04 EZ ACTIVITES
TEPC(STATUS CHECK)
(ORB OPS, CREW SYS)Step A6
OCAC Filter Inspect
Hard Reboot PGSCs (Except WLES & WORLDMAP)

Time	CDR KELLY	PLT HOBAUGH	MS1 CALDWELL
11:00	SLEEP	SLEEP	SLEEP
12:00	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	FLIGHT SLEEP LOG(ORB OPS, SDBI) POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	SALIVA COLLECT(ORB OPS, SDBI) FLIGHT SLEEP LOG(ORB OPS, SDBI) POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)
13:00	PRIVATE MEDICAL CONFERENCE Perform via PRIVATE A/G2		
14:00	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
15:00	EVA SYS: 2.315 HYGIENE BREAK Steps 21-30 NOTE: MCC-H performs Step 24		
16:00	EVA SYS: 2.320 10.2 PSIA CAMPOUT EVA PREP In Step 1.3, perform EVA COMM CONFIG Steps 1 & 5 Only		
			EXERCISE

BIAS-XLV-ZVV

DORB: 14, 15, 16, 13

ORB: 40, 41, 42, 43

STS-118 FD04

GMT Date 08/11 (223) | MET Day 002 | TDRS W E Z | DOR 14 15 16 | ORB 40 41 42 43 | STS ATI BIAS-XLV-ZVV

MS2 MASTRACCHIO

SLEEP

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA SYS: 2.315 HYGIENE BREAK
Note: start no earlier than 8:40hrs from end of 2.305 10.2 PSIA CAMPOUT MASK PREBREATHE

MCC-H performs Steps 1-4, 16-20, & 24

EVA SYS: 2.320 10.2 PSIA CAMPOUT
EVA PREP
In Step 1.3, perform EVA COMM CFG Steps 1 & 5 Only

MS3 WILLIAMS

SLEEP

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA SYS: 2.315 HYGIENE BREAK
Note: start no earlier than 8:40hrs from end of 2.305 10.2 PSIA CAMPOUT MASK PREBREATHE

MCC-H performs Steps 1-4, 16-20, & 24

EVA SYS: 2.320 10.2 PSIA CAMPOUT
EVA PREP
In Step 1.3, perform EVA COMM CFG Steps 1 & 5 Only

MS4 MORGAN

SLEEP

SALIVA COLLECT(ORB OPS, SDBI)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SH POST-SLEEP CONFIG
(SH OPS, ON-ORBIT)

DAILY TRANSFER LIST UPDATE
Ref. MSG 030

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

TRANSFER Ref. MSG 030
Ref SH Xfer List:Items 102 &105,113-118
Ref MDDK Xfer List: Items 7-11,13-15

MS5 DREW

SLEEP

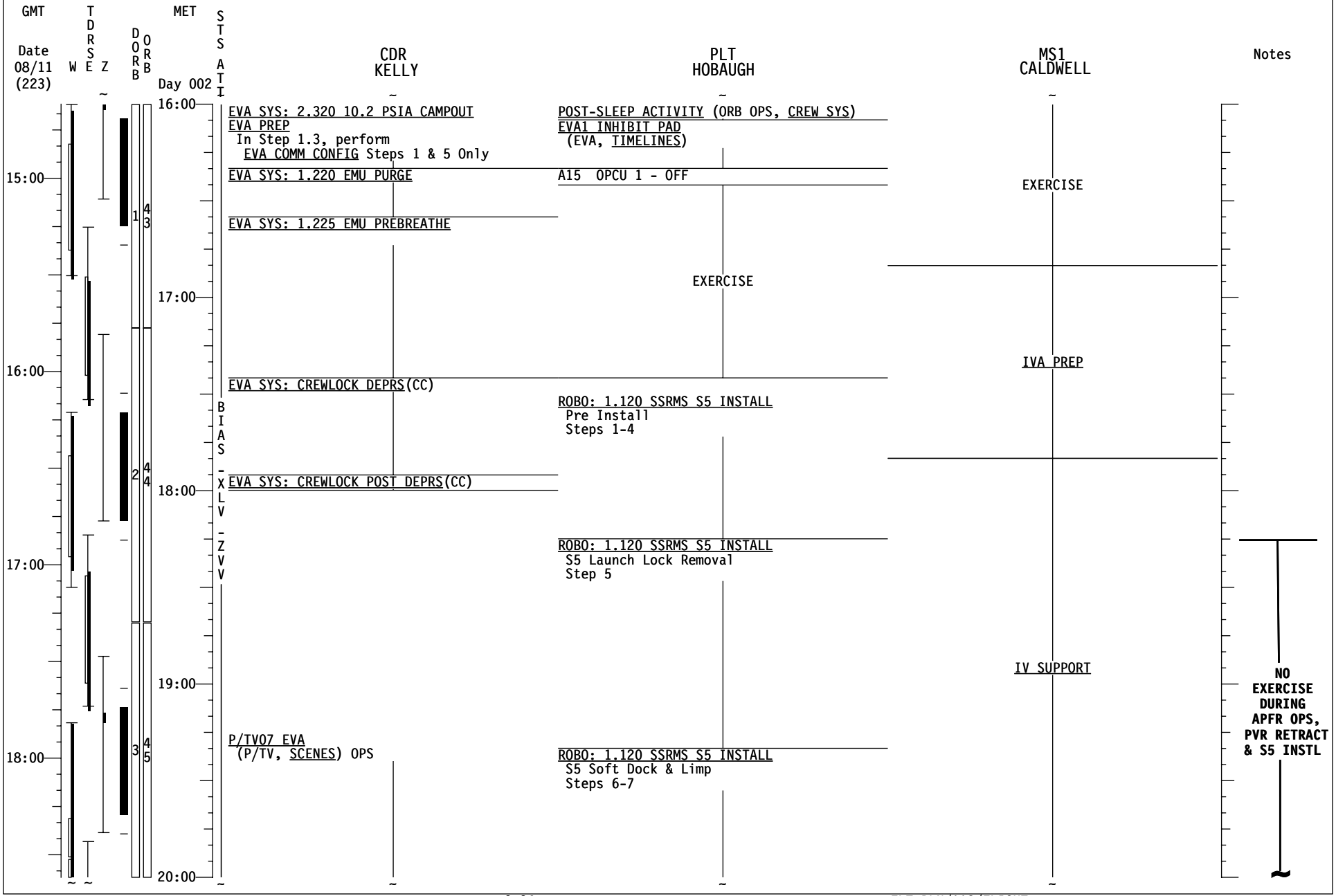
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MERLIN STAT CK(PL OPS,MERLIN/SPEGIS)
CCM-A STATUS CK(PL OPS, CCM-A)

TRANSFER Ref. MSG 030
Ref. SH Xfer List:
Items: 119-122.5, 132.1

Notes

STS-118 FD04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16:00
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18:00
17:00
19:00
18:00
20:00
1 43
2 44
3 45
BIAS -XLV -ZVV
CDR
KELLY
PLT
HOBAUGH
MS1
CALDWELL
Notes
EVA SYS: 2.320 10.2 PSIA CAMPOUT
EVA PREP
In Step 1.3, perform
EVA COMM CONFIG Steps 1 & 5 Only
EVA SYS: 1.220 EMU PURGE
EVA SYS: 1.225 EMU PREBREATHE
EVA SYS: CREWLOCK DEPRS(CC)
EVA SYS: CREWLOCK POST DEPRS(CC)
P/TV07 EVA
(P/TV, SCENES) OPS
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)
EVA1 INHIBIT PAD
(EVA, TIMELINES)
A15 OPCU 1 - OFF
EXERCISE
ROBO: 1.120 SSRMS S5 INSTALL
Pre Install
Steps 1-4
ROBO: 1.120 SSRMS S5 INSTALL
S5 Launch Lock Removal
Step 5
ROBO: 1.120 SSRMS S5 INSTALL
S5 Soft Dock & Limp
Steps 6-7
EXERCISE
IVA PREP
IV SUPPORT
NO EXERCISE DURING APFR OPS, PVR RETRACT & S5 INSTL

STS-118 FD04

GMT Date 08/11 (223) | W | TDRSE | Z | DORB | ORB | MET Day 002 | STS ATI | MS2 MASTRACCHIO | MS3 WILLIAMS | MS4 MORGAN | MS5 DREW | Notes

16:00

EVA SYS: 2.320 10.2 PSIA CAMPOUT
EVA PREP
In Step 1.3, perform
EVA COMM CFG Steps 1 & 5 Only

EVA SYS: 2.320 10.2 PSIA CAMPOUT
EVA PREP
In Step 1.3, perform
EVA COMM CFG Steps 1 & 5 Only

15:00

EVA SYS: 1.220 EMU PURGE

EVA SYS: 1.220 EMU PURGE

EVA SYS: 1.225 EMU PREBREATHE

EVA SYS: 1.225 EMU PREBREATHE

TRANSFER Ref. MSG 030
Ref. SH Xfer List:Items 102 & 105, 113-118
Ref. MDDK Xfer List: Items 7-11,13-15

TRANSFER Ref. MSG 030
Ref. SH Xfer List:
Items: 119-122.5, 132.1

17:00

16:00

EVA SYS: CREWLOCK DEPRS(CC)

EVA SYS: CREWLOCK DEPRS(CC)

P/TV07 EVA
(P/TV, SCENES) SETUP

JNT OPS: 3.102 NITROGEN
TRANSFER INIT

BIAS-XLV-ZVV

P/TV07 EVA
(P/TV, SCENES) OPS

18:00

EVA SYS: CREWLOCK POST DEPRESS(CC)

EVA SYS: CREWLOCK POST DEPRS(CC)

CREWLOCK EGRESS

CREWLOCK EGRESS

17:00

SORTIE SETUP

SORTIE SETUP

19:00

S5 TO S4 LAUNCH LOCK REMOVE

S5 TO S4 LAUNCH LOCK REMOVE

A NOTE: Perform during MERLIN/SPEGIS SETUP

NO EXERCISE DURING APFR OPS, PVR RETRACT & S5 INSTL

18:00

MERLIN SPEGIS SETUP
(PL OPS, MERLIN/SPEGIS)
NOTE: P/TV12 MDDK PAYLOADS, MERLIN PHOTO should be performed in concurrence.

P/TV12 MIDDECK PAYLOADS
(P/TV, SCENES) MERLIN PHOTO A
OPS, Item 1

P/TV12 MIDDECK PAYLOADS
(P/TV, SCENES) MERLIN Video
OPS, Item 1

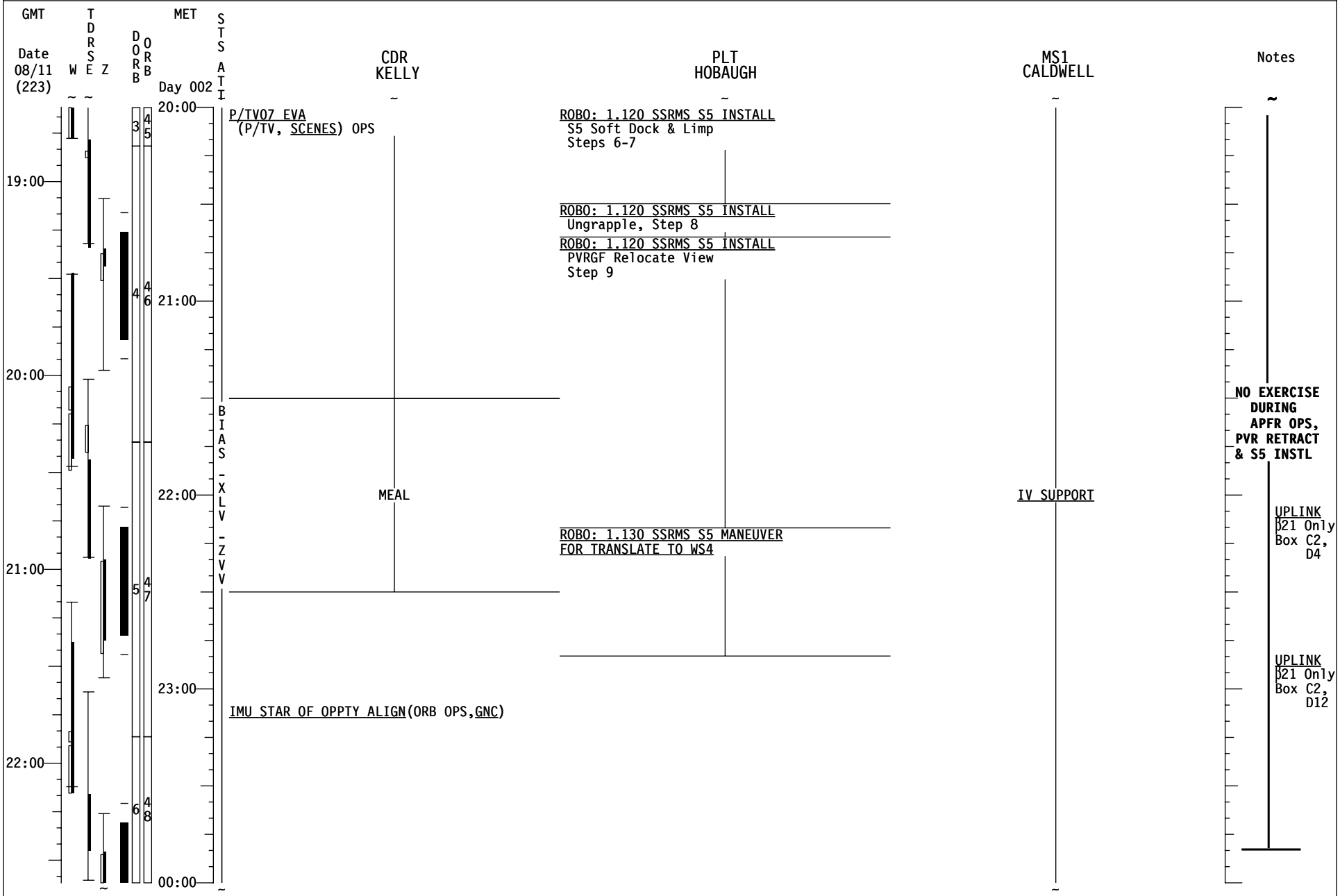
S5 INSTALL

S5 INSTALL

STS/ISS H2O CNTR FILL
(ORB OPS,ECLS)Init CWC FILL#1
Duration ~54min, Ref. MSG 005

20:00

STS-118 FD04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STS ATT
BIAS -XLV -ZVV
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22:00
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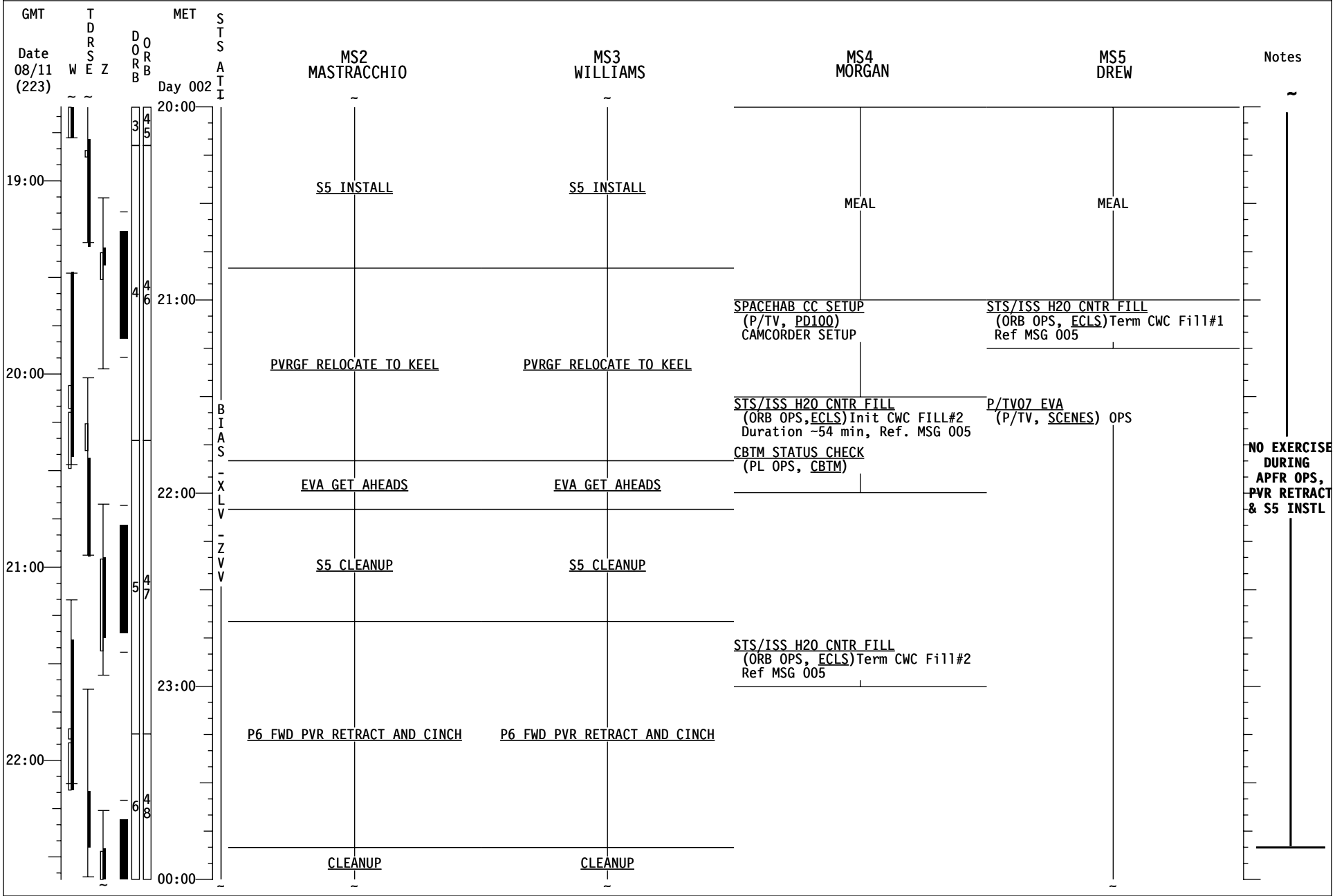
3
4
5
6
45
46
47
48
CDR
KELLY
P/TVO7 EVA
(P/TV, SCENES) OPS
MEAL
IMU STAR OF OPPTY ALIGN(ORB OPS,GNC)
PLT
HOBAUGH
ROBO: 1.120 SSRMS S5 INSTALL
S5 Soft Dock & Limp
Steps 6-7
ROBO: 1.120 SSRMS S5 INSTALL
Ungrapple, Step 8
ROBO: 1.120 SSRMS S5 INSTALL
PVRGF Relocate View
Step 9
ROBO: 1.130 SSRMS S5 MANEUVER
FOR TRANSLATE TO WS4
MS1
CALDWELL
IV SUPPORT
Notes
NO EXERCISE
DURING
APFR OPS,
PVR RETRACT
& S5 INSTL
UPLINK
D21 Only
Box C2,
D4
UPLINK
D21 Only
Box C2,
D12

STS-118 FD04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MS3
WILLIAMS
MS4
MORGAN
MS5
DREW
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20:00
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22:00
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3
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6
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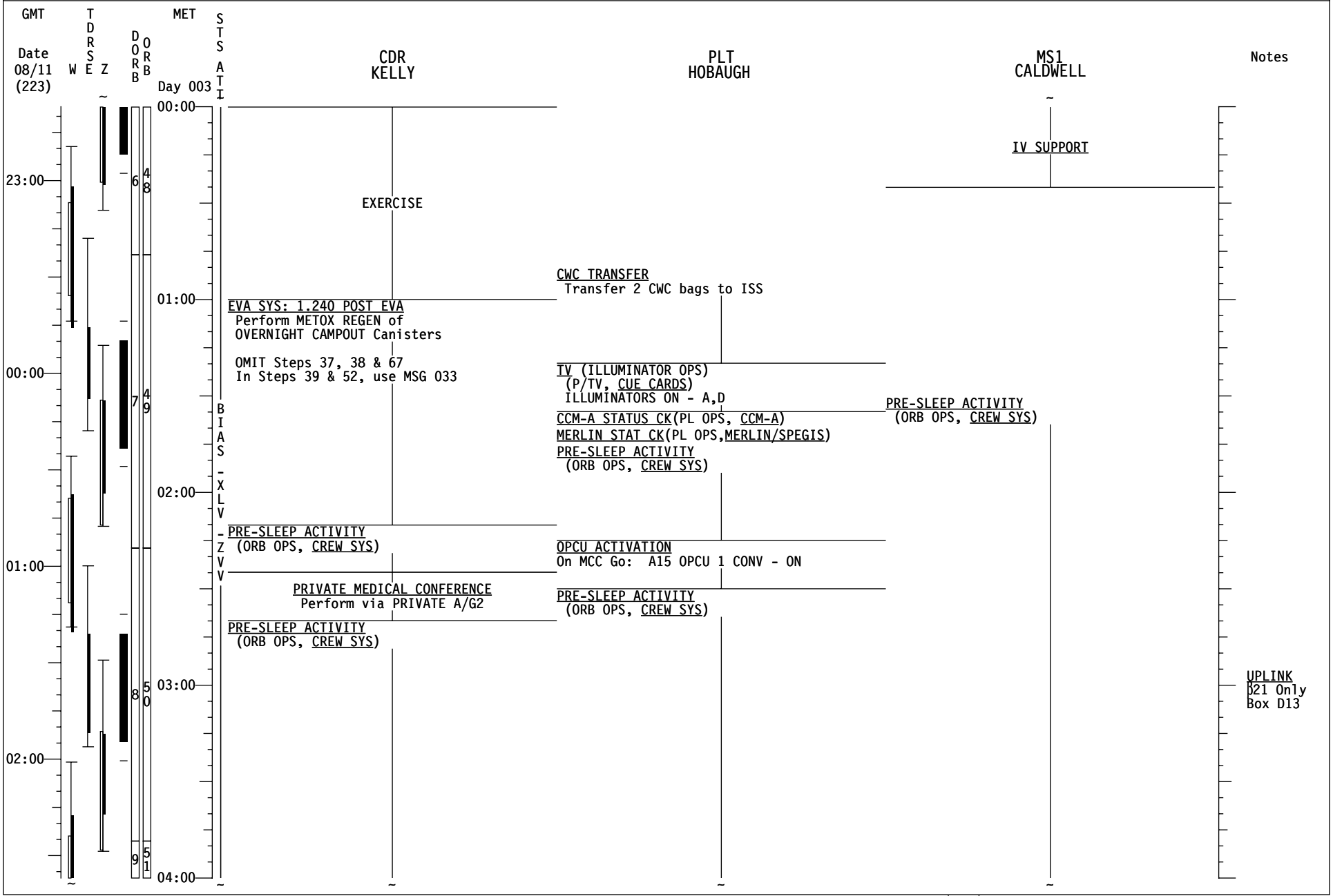
46
47
48
BIAS -XLV -ZVV
S5 INSTALL
S5 INSTALL
MEAL
MEAL
SPACEHAB CC SETUP
(P/TV, PD100)
CAMCORDER SETUP
STS/ISS H2O CNTR FILL
(ORB OPS, ECLS)Term CWC Fill#1
Ref MSG 005
PVRGF RELOCATE TO KEEL
PVRGF RELOCATE TO KEEL
STS/ISS H2O CNTR FILL
(ORB OPS,ECLS)Init CWC FILL#2
Duration ~54 min, Ref. MSG 005
P/TV07 EVA
(P/TV, SCENES) OPS
CBTM STATUS CHECK
(PL OPS, CBTM)
EVA GET AHEADS
EVA GET AHEADS
S5 CLEANUP
S5 CLEANUP
STS/ISS H2O CNTR FILL
(ORB OPS, ECLS)Term CWC Fill#2
Ref MSG 005
P6 FWD PVR RETRACT AND CINCH
P6 FWD PVR RETRACT AND CINCH
CLEANUP
CLEANUP
NO EXERCISE DURING APFR OPS, PVR RETRACT & S5 INSTL

STS-118 FD04


GMT
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DOR
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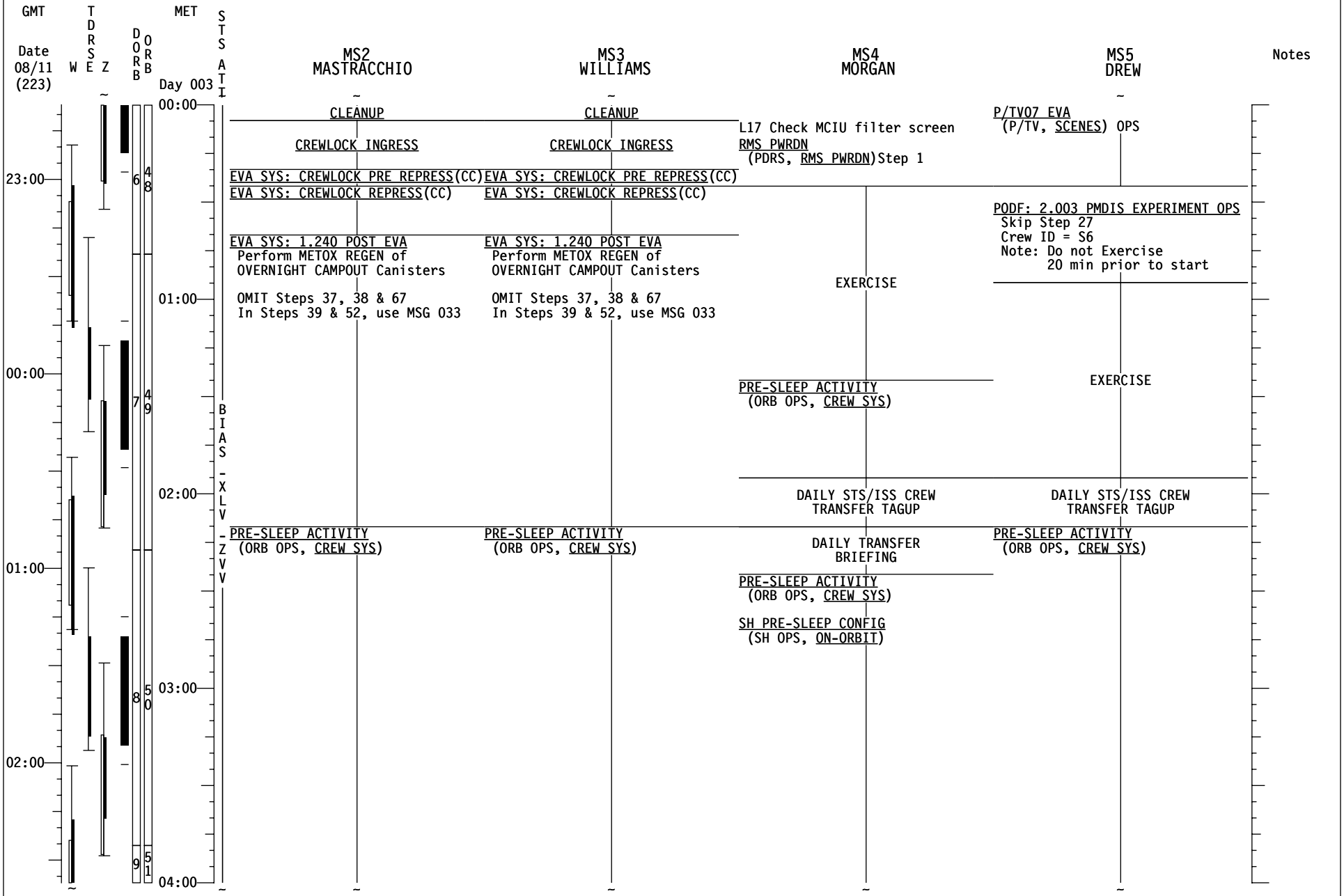
Day 003
STS ATI
CDR
KELLY
PLT
HOBAUGH
MS1
CALDWELL
Notes
00:00
01:00
02:00
03:00
04:00
23:00
00:00
01:00
02:00
BIAS-XLV-ZVV
EXERCISE
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
OMIT Steps 37, 38 & 67
In Steps 39 & 52, use MSG 033
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRIVATE MEDICAL CONFERENCE
Perform via PRIVATE A/G2
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
CWC TRANSFER
Transfer 2 CWC bags to ISS
TV (ILLUMINATOR OPS)
(P/TV, CUE CARDS)
ILLUMINATORS ON - A,D
CCM-A STATUS CK(PL OPS, CCM-A)
MERLIN STAT CK(PL OPS,MERLIN/SPEGIS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
OPCU ACTIVATION
On MCC Go: A15 OPCU 1 CONV - ON
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
IV SUPPORT
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
UPLINK
321 Only
Box D13

STS-118 FD04


GMT
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DOR B
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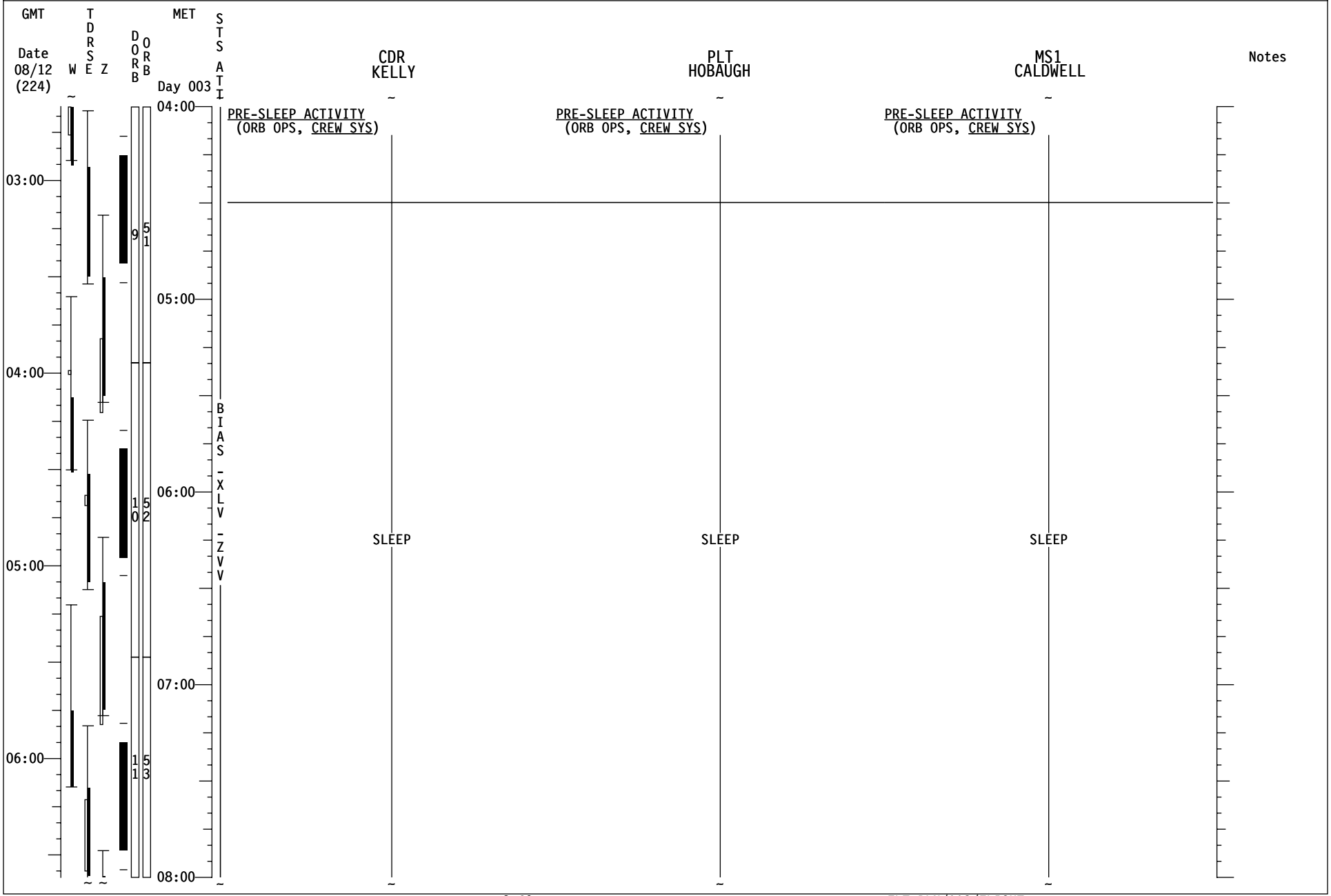
MET
Day 003
STS ATI
MS2
MASTRACCHIO
MS3
WILLIAMS
MS4
MORGAN
MS5
DREW
Notes
00:00
23:00
01:00
00:00
01:00
02:00
03:00
02:00
04:00
CLEANUP
CREWLOCK INGRESS
EVA SYS: CREWLOCK PRE REPRESS(CC)
EVA SYS: CREWLOCK REPRESS(CC)
EVA SYS: 1.240 POST EVA
Perform METOX REGEN of
OVERNIGHT CAMPOUT Canisters
OMIT Steps 37, 38 & 67
In Steps 39 & 52, use MSG 033
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
L17 Check MCIU filter screen
RMS PWRDN
(PDRS, RMS PWRDN)Step 1
EXERCISE
DAILY STS/ISS CREW
TRANSFER TAGUP
DAILY TRANSFER
BRIEFING
SH PRE-SLEEP CONFIG
(SH OPS, ON-ORBIT)
P/TV07 EVA
(P/TV, SCENES) OPS
PODF: 2.003 PMDIS EXPERIMENT OPS
Skip Step 27
Crew ID = S6
Note: Do not Exercise
20 min prior to start
BIAS -XLV -ZVV

STS-118 FD04


GMT
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08/12
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DOB
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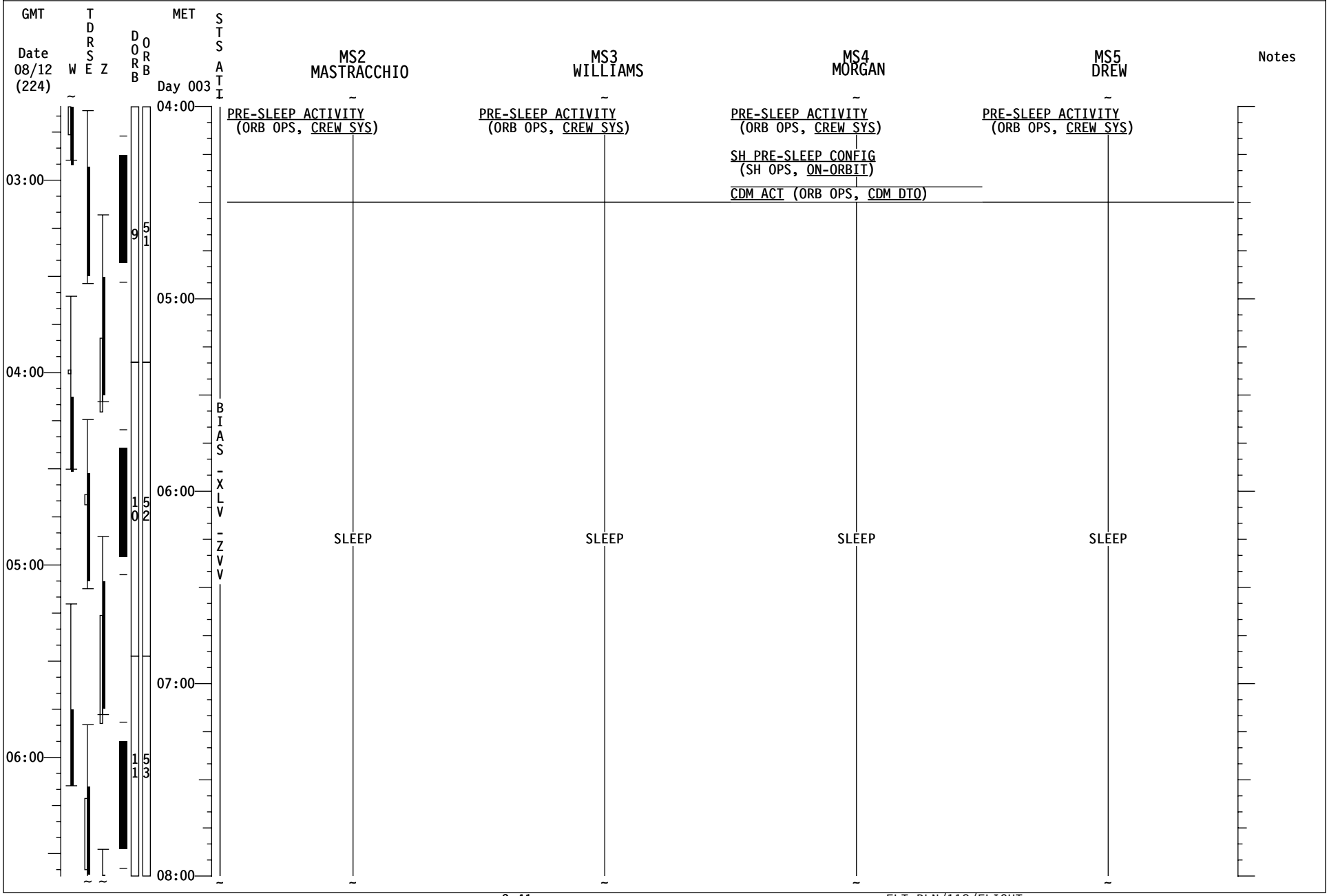
MET
Day 003
STS ATI
CDR
KELLY
PLT
HOBAUGH
MS1
CALDWELL
Notes
04:00
03:00
05:00
04:00
06:00
05:00
07:00
06:00
08:00
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SLEEP
SLEEP
SLEEP
BIAS -XLV -ZVV
9 51
102 152
113 153

STS-118 FD04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04:00
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08:00
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SH PRE-SLEEP CONFIG
(SH OPS, ON-ORBIT)
CDM ACT (ORB OPS, CDM DTO)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
BIAS -XLV -ZVV
SLEEP
SLEEP
SLEEP
SLEEP
9
51
102
152
113
153

Good Morning Endeavour!

What a great day you had yesterday, first with the docking and then the S5 transfer! From down here the entire day looked “picture perfect”! Don’t forget to enjoy your time docked to station!

As we mentioned to you yesterday, we are planning to perform Focused Inspection on FD5.

You will be happy to know that SSPTS is performing beautifully. Power transfer is right on predicts, putting us right on track for a 14+2 day mission. As we discussed pre-launch, we will be waiting a bit longer for engineering evaluations to be completed before officially stepping up to the extra days.

We are ready to support your EVA today!

YOUR CURRENT ORBIT IS: 186 X 182 NM

NOTAMS:

NOR – NORTHRUP: ALL RWYS ARE RED – WET.
EDW – EDWARDS: RWY 15/33 ELS ONLY. RWY 18L NOT USABLE.
WAK – WAKE ISLAND: CLOSED DUE TO RECONSTRUCTION.
YYR – GOOSE BAY: RWY 08/26 CLOSED. 16/34 AVAILABLE.
ZZA – ZARAGOZA: INSTALLING MOBILE NATO BARRIER.
IKF – KEFLAVIK: NO AGREEMENT FOR USE.
AWG – RIO GALLEGOS: NO AGREEMENT FOR USE.

NEXT 2 PLS OPPORTUNITIES:

EDW22 ORB 48 – 3/00:06 (SKC 230/15P25)
EDW22 ORB 64 – 4/00:29 (SKC 230/14P24)

OMS TANK FAIL CAPABILITY:

L OMS FAIL: YES (SHALLOW TARGETS)
R OMS FAIL: YES (SHALLOW TARGETS)

LEAKING OMS PRPLT BURN:

L OMS LEAK: BURN OUT-OF-PLANE AN+76 <= TIG <= AN+26
OTHERWISE BURN RETROGRADE
R OMS LEAK: BURN OUT-OF-PLANE AN+77 <= TIG <= AN+26
OTHERWISE BURN RETROGRADE

OMS QUANTITIES(%)

L OMS	R OMS
OX = 45.9	OX = 44.9
FU = 46.0	FU = 44.9

SUBTRACT I’CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

OMS	435 FPS
ARCS (TOTAL ABOVE QTY1)	37 FPS
TOTAL IN THE AFT	472 FPS
ARCS (TOTAL ABOVE QTY2)	66 FPS
FRCS (ABOVE QTY 1)	34 FPS
AFT QTY 1	84 %
AFT QTY 2	46 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
APU 3	Seal cavity drain system pressure decay	None. Drain system is leaking N2 only; no appreciable amount of fuel is present. A subsequent fuel leak into the drain system has a potential path into the aft compartment.	To reduce potential for developing fuel leakage, APU 3 will be used only for entry (EI-13 start). Drain system pressure can be monitored on SM SYS SUMM 2, APU 3 PMP LK P.

Good morning Barb, Al & Dave,

Great work yesterday – thanks very much! We've updated the Transfer List Excel file to show completed items and updated final locations. We are not asking you to update your books for any updated locations you called down to us, but you will see those updated in the Transfer List Excel file. Today's changes include the addition of another Scopemeter Temperature Probe Kit (item 431.12) to be packed by Clay per message 15-0900A.

For STS, the Transfer List Excel file, FD04_TransferList_STS118.xls, is located on the KFX machine in **C:\OCA-up\transfer**.

For ISS, the Transfer List Excel file, FD04_TransferList_STS118.xls, is located in **K:\OCA-up\transfer**.

Questions:

Q: Please confirm that item 144.1 (silver bio syringes move from SH to mddk) is complete. We didn't discuss this item yesterday, but expect that Al did this on FD1.

Answers:

A: Macros in the Transfer List: In order to use these macros on the PGSCs, the macro security settings on the PGSCs need to be changed as follows:

1. Open Excel by clicking on the **Start** button → **Programs** → **Microsoft Office** → **Microsoft Office Excel 2003** Icon.

2. Click on "**Tools**" > "**Macro**" > "**Security ...**"
   *Note – After clicking on the **Tools** button, you may have to click on the ⌄⌄ at the bottom of the pull down menu to select Macro.*

3. Click "**Security Level**" tab in dialog box

4. Click the "**Medium**" radio button.

5. Click **OK** button and close Excel.

Note: When opening the Transfer List Excel file in C:\OCA-up\Transfer, a Security Warning window will appear - click 'Enable Macros' button.

We do not believe this setting change is required on the SSCs. However if you attempt to use the TL file on the SSC and are not given the option to enable macros when the file is opened, executing the above steps should resolve the problem.

A: Item 106 Coldbag: You temp stowed this item on NOD1O4_B2 because the locker was full. The coldbag currently in NOD1O4_B2 is returning as item 706. Clay will put cold samples in this coldbag on hatch closure day. Sorry we missed this conflict….

A: Clay's request to not to stow any items at LAB1P6. We had only planned to transfer one more item to LAB1P6 – item 11 (ODF). We've changed the final location for this item (to LAB1D6) in today's transfer list changes.

For today - FD04 Choreography

Spacehab

- Items 102 & 105: Remove and transfer CTBS from AC03 and AC06 to ISS
- Items 113-118: Move 5MLE launched at AP01 to AC03 and transfer contents to ISS
- Items 119-122.5 (AI): Move 5MLE launched at AP04 to AP01 and transfer contents to ISS
  - Temp stow PWRs on MDDK for fill on FD5
  - Swap wrenches in ISS IVA Toolbox in Node 1; add old ones to return bag 431
- Item 132.1 (AI): Transfer EPO KIT C to MDDK for EPO video

Middeck

- Items 7-11: Unpack 5MLE Bag F (MD CEIL PORT 2)
  - Transfer CHeCS 1.0 CTB for RAD deploy (ISS crew) on FD6
- Items 13-15: Unpack 5MLE Bag B (MD CEIL STBD 2)
  - Retrieve Ziplock for returning IEU and temp stow in SH

Please update the Middeck Transfer List as follows:

In **RESUPPLY** tab:
Make Pen and Ink update to Resupply Page 2:
Item 11: Update 'Stowage at Undock' to read: 'LAB1D6 rack front'
Replace following pages
Resupply Page 4
Resupply Page 5

In **MDDK RTN REALTIME ADDITIONS** tab:
Replace Return Page 7

Please update the Spacehab Transfer List as follows:

In **LAYOUTS** tab:
Make Pen and Ink update to Page SL-8:
At PF21, add "425.1 Baseplate Ballast Assembly"

In **RESUPPLY** tab:
Replace following pages:
Resupply Page 17
Resupply Page 27

In **SWAB** tab:
Replace Swap Page 14

In **RETURN** tab:
Replace Return Page 10
Replace Return Page 11

For tomorrow - FD05 Choreography

Middeck

- Item 717 (Dave): Stow PMDIS CD from Dave/Alvin's PMDIS activities for return in MDDK
- Items 701-703 (Fyodor): Stow БОК-3 items after timelined activity БОК-3 R&R

Spacehab

- Items 119-122.5 (remaining items) (Al): Finish transferring contents of 5MLE launched at AP04 to ISS
- Items 183-190: Transfer SF Rack Front items to ISS
  - Install ANITA locker insert; pack 3.0 CTB for return and temp stow.
  - Install ISIS dwr (save foam for returning dwr); add returning dwr/foam to prepack bag.
  - Transfer TVIS Skirt to ISS for FD5 R&R
- Items 100 & 103: Remove and transfer items from AC01, AC04 to ISS
- Items 124-126: (Dave) Move 5MLE launched at AS01 to AC01 ;and transfer contents to ISS
  - OSE for OSE Config on FD7 (EVA 4)
  - Banisters (foam will be stowed in AP04 5MLE with IELK)
- Items 127-129: (Dave) Move 5MLE launched at AS03 to AS01 and transfer contents to ISS
  - OSE for OSE Config on FD7 (EVA 4)
  - Banisters (foam will be stowed in AP04 5MLE with IELK)
- Item 627: Pack 5MLE launched at AP04 with IELK; strap at AP04
  - Add foam (2) from banisters in 5MLE bags
- Items 632-633: Pack 5MLE launched at AP01 with coldbags; temp stow for return at AS01
- Item 434.31 (Fyodor): Pack old TVIS skirt for return after TVIS Skirt R&R
- Item 123 (Rick or Dave): Transfer new SAFER to ISS for checkout
- Item 746 (Scott): Transfer old SAFER to SH during checkout

Please call us with any questions.

- The Transfer Team

MSG 032 - O2 TANK 2 MANUAL HEATER OPERATION

Manual Heater Ops Summary:

In order to complete the nominal mission duration, as well as protect an extra docked day, manual heater operations on O2 Tank 2 are required. A table showing the days where the manual operations will occur is included below for your review. Please provide comments on the plan so that it can be adjusted to accommodate any suggestions that you may have. The following times are approximate and subject to change:

Start time	Stop time	Flight Day	Day's Activities	Approximate Tank QTY
02/18:30	03/04:00	4	EVA 1	98%
03/14:00	04/03:30	5	Focused Inspection	91%
05/13:00	06/03:00	7	ESP3 Unberth and Install	81%
07/12:30	08/02:00	9	Transfer, off-duty	70%
09/11:30	10/00:30	11	Transfer	61%
10/10:30	11/00:00	12	Transfer, off-duty, hatch close	54%
12/10:00	13/00:00	14	FCS C/O	44%

During manual heater ops for O2 TK2, the A (or B) heater will be cycled ON and OFF based on pressures in the tank - only one heater is used during manual heater ops in order to maximize the time between switch throws; when the tank is close to full both A and B heaters might be needed to support vehicle loads. All other O2 Cryo heaters will be turned OFF. A TMBU will be sent to set the O2 TK P upper and lower FDA limits to alert you when it is time to turn the heater OFF and ON. You will be using EPS MAL, SSR-201 CRYO HTR MANUAL OPS (pg 7-295).

See chart below for estimated times between switch throws.
Performing Manual Heater Ops on O2 TK2 causes us to deviate from our nominal O2 cryo management plan. **We are still following our nominal H2 management plan.**

	Heater ON (assumes single htr)	**Heater OFF**
TK QTY	**Rise Cycle**	**Decay Cycle**
100%	60 min	15 min
75%	15 min	30 min
65%	10 min	45 min
50%	20 min	120 min
25%	60 min	360 min

15-0738 (MSG 033) EMU WATER RECHARGE WITH ADDED DATA (1.506 BASELINE)

(25 Minutes)
(30 Minutes if setting up CWC)

OBJECTIVE:

Recharge EMU feedwater tanks with iodinated water from EMU Water Recharge Bag Payload Water Reservoir (PWR). A small quantity is then dumped from the feedwater tanks to provide ullage for condensate collection during the next EMU prebreathe. Due to recent fill pressure issues, additional data is to be recorded and reported by the crew.

INITIATE (15 MINUTES)

MCC-H/IV 1. POWERING ON UHF 1(2) RADIO

PCS

If powering on UHF 1
Perform {2.701 UHF 1 ORU ACTIVATION}, all (SODF: C&T: NOMINAL: UHF), then:

If powering on UHF 2
Perform {2.703 UHF 2 ORU ACTIVATION}, all (SODF: C&T: NOMINAL: UHF), then:

E-Lk 2. Unstow designated EMU Water Recharge Bag (PWR) from floor bin.

CAUTION

PWRs should be inspected for gas bubbles prior to connecting them to the IRU to avoid introducing gas into the EMU feedwater tanks. If a significant quantity of gas is observed, a PWR de-gas may be required.

PWR 3. Unzip restraint bag to access bladder.
In Table 0, record approximate visual quantity of H2O and gas bubbles.
Zip restraint bag closed.

A/L1F2 4. Attach bag to wall below IRU.

IRU 5. EMU Water Recharge Bag →|← H2O IN Port

6. √H2O outlet vlv (rotary) – CLOSED

If EMUs not powered

7. POWERING UP EMUs

UIA 7.1 √sw PWR EV-1,2 (two) – OFF
√PWR EV-1,2 LEDs (four) – Off
√EMU O2 SUPPLY PRESS gauge: < 950

C-Lk wall 7.2 Remove SCU from stowage straps and pouches.
Transfer SCU to E-Lk.

DCM 7.3 Remove DCM cover.
Attach with Velcro to DCM.

7.4 SCU →|← DCM

√SCU locked

7.5 sw POWER → BATT

CAUTION
EMU must be on BATT power when UIA suit power is turned on.

PSA 7.6 √sw SUIT SELECT (two) – OFF
√sw EMU MODE EMU1,2 (two) – PWR

7.7 sw MAIN POWER → ON

√MAIN POWER LED – On

7.8 sw SUIT SELECT (two) → EMU 1,2

√EMU 1,2 LEDs (two) – On
√EMU 1,2 Volts: 18.0 to 19.0

UIA 7.9 sw PWR EV-1,2 (two) → ON

√PWR EV-1,2 EMU LEDs (two) – On

DCM 7.10 sw POWER → SCU

8. √sw Comm FREQ – LOW

9. sw COMM mode → PRI

10. CONFIGURE EMUs FOR CONTINUOUS EMU DATA
sw DISP → STATUS, until DATA?COMBO displayed

sw DISP → YES (hold for 2 seconds)

sw DISP → STATUS, until DATA EMU? displayed

sw DISP → YES (hold for 2 seconds)

Verify DATA?EMU displayed

sw DISP → STATUS, until H2O WP displayed

sw DISP → YES (hold for 2 seconds)

UIA 11. √WATER EV-1,2 REG vlv (two) – SUPPLY

12. WATER EV-1,2 SUPPLY vlv (two) → OPEN

If PSA Utility Outlet power being used for other applications
13. √**MCC-H** for verification of PSA Utility Outlet power loading

PSA 14. sw IRU/UTILITY POWER → ON

√IRU/UTILITY POWER LED – On
√IRU Volts: 27.0 to 29.0

NOTE
1. The following step powers on the IRU.
2. Be prepared to verify the POWER, PRESS, and TEMP LEDs briefly illuminate when IRU POWER is taken ON. As required, notify **MCC-H** of any missing pixels on QUANTITY display.

IRU 15. sw POWER → ON

√POWER, PRESS, TEMP LEDs (three) – On (at startup)

When 2.5-second LED and pixel check complete
16. √POWER LED remains – On

17a. sw PUMP → ON

17b. **In Table 0**, record IRU Supply Pressure (NOTE: this is expected to be similar to the end of fill pressure.)

18a. H2O outlet vlv (rotary) ↶ EMU SUPPLY, start timer.
In Table 0, record GMT time.

√PUMP LED – On (green)
√QUANTITY display – ↑

****
* If TEMP LED or PRESSURE LED – On (yellow)
* | sw PUMP → OFF
*
* | √**MCC-H**
****

1 minute into recharge elapsed time:
18b. **In Table 0**, record IRU QUANTITY (NOTE: expect ~1lb)

DCM 18c. √STATUS: H2O WP
In Table 0, record EMU1 and EMU2 H2O WP

18d. As comm permits, report Table 0 data to **MCC-H**.

Table 0. Recharge Initiation Data

GMT / HH:MM:SS	**Step 3:** Bag Serial Number	**Step 3:** Approx H2O and Gas Content		**Step 17b:** IRU Supply Pressure	**Step 18b:** IRU QUANTITY	**Step 18c:** STATUS: H2O WP	
		H2O (% full)	Gas (mL)			EMU1	EMU2

TERMINATE (10 MINUTES)

DCM 19. √STATUS: H2O WP, compare with IRU Supply Pressure

If H2O WP ≤ 12.0 psi, Quantity display not ↑, and bag NOT empty

19a. Perform troubleshooting per {15-0739 EMU WATER RECHARGE TROUBLESHOOTING} (SODF: Uplinked Procedures: EVA)

If H2O WP ≤ 12.0 psi, Quantity display not ↑, and bag empty

IRU 19.1 sw PUMP → OFF

19.2 H2O outlet vlv (rotary) ↷ CLOSED

19.3 Record value from IRU Quantity display in Table 1.

Table 1. Payload Water Reservoir Content during Swap

Date	**Step 19.3**: IRU Quantity	**Step 19.6**: Bag Serial Number	**Step 19.6**: Approx H2O and Gas Content	
			H2O (L)	Gas (mL)

19.4 EMU Water Recharge Bag ←|→ H2O IN Port
Stow in E-lk Floor Bin.

E-lk 19.5 Unstow new designated EMU Water Recharge Bag.

19.6 Unzip restraint bag to access bladder.
In Table 1, record approximate visual quantity of H2O and gas bubbles
As comm permits, report Table 1 data to **MCC-H**.
Zip restraint bag closed.

IRU 19.7 EMU Water Recharge Bag →|← H2O IN Port

19.8 Go to step 17.

When H2O WP > 12.0 psi, stable for ~30 seconds, and Quantity display not ↑ (charging complete)

IRU 20a. **In Table 2**, record Supply Pressure gauge reading

DCM 20b. √STATUS: H2O WP, compare with IRU Supply Pressure
In Table 2, record EMU1 and EMU2 H2O WP

UIA 20c. WATER EV-1,2 SUPPLY vlv (two) → CLOSE

IRU 21. sw PUMP → OFF

√PUMP LED – Off

22. H2O outlet vlv (rotary) ↷ CLOSED.

23. **In Table 2**, record value from Quantity display.

24. sw POWER → OFF

√POWER LED – Off

25. EMU Water Recharge Bag ←|→ H2O IN Port

Unzip restraint and inspect bag for water and gas content.
Record on **Table 2**.
Zip restraint bag closed.

26. As comm permits, report Table 2 data to **MCC-H**.

Table 2. Recharge Termination Data

Date	**Step 20a:** IRU Supply P	**Step 20b:** STATUS: H2O WP		**Step 18b:** IRU QUANTITY	**Step 23:** Bag Serial #	**Step 25:** Approx H2O and Gas Content	
		EMU1	EMU2			H2O (% full)	Gas (mL)

A/L1D1 27. Stow bag in floor bin.
As comm permits, report new stowage location to **MCC-H**.

If PSA Utility Outlet power not being used for other applications

PSA 28. sw IRU/UTILITY POWER → OFF

√IRU/UTILITY POWER LED – Off

29. SETTING UP EMU WASTEWATER COLLECTION BAG (5 MINUTES)

29.1 Unstow the following

- ☐ CWC s/n ____ (Waste Water)
- ☐ Yellow Red QD adapters (2)
- ☐ Blue Blue Hose

If required

29.2 Yellow Red QD (2) →|← Blue Blue Hose (one each end)

29.3 Yellow Red QD →|← CWC

UIA 29.4 Yellow Red QD →|← Waste Water Port

Refer to Figure 1 for CWC attachment configuration.

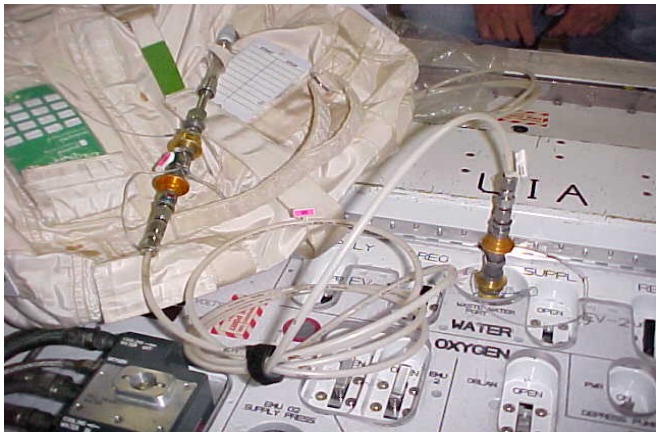

Figure 1.- CWC connected to UIA Waste Water Port.

EMU 30. √Helmet ←|→ HUT

Install SCOF.

√SCOF locked

DCM 31. O2 ACT → IV

UIA 32. √WATER EV-1(2) SUPPLY vlv – CLOSE

NOTE
Be prepared to start a 30-second timer for the ullage dump. Steps 33 and 34 should be performed serially for EMU 1 and EMU 2.

33. WATER EV-1(2) REG vlv → WASTE

Wait 30 seconds.

34. WATER EV-1(2) REG vlv → SUPPLY

35. Repeat steps 33 and 34 for other EMU.

DCM 36. O2 ACT → OFF

UIA 37. Yellow Red QD ←|→Waste Water Port

38. Yellow Red QD ←|→CWC

39. Install UIA Waste Water Port Cap

40. Restow CWC, Blue Blue Hose with Yellow Red QDs.

EMU 41. Remove SCOF.
Stow SCOF in EMU Equipment Bag.

DCM 42. sw COMM mode → OFF

43. As required per timeline, go to {1.240 POST EVA} (SODF: ISS EVA SYS: EVA PREP/POST).

or

Go to {1.525 LCVG WATER FILL} (SODF: ISS EVA SYS: EMU MAINTENANCE).

or

Go to step 44.

44. POWERING DOWN EMUs (AS REQUIRED)

DCM 44.1 √sw POWER – SCU

UIA 44.2 sw PWR EV-1,2 (two) → OFF

√PWR EV-1,2 LEDs (four) – Off
√PWR EV-1,2 VOLTS: ~00.0

44.3 OXYGEN EMU 1,2 vlv (two) → CLOSE

PSA 44.4 sw SUIT SELECT (two) → OFF

√SUIT SELECT LEDs (four) – Off

44.5 sw MAIN POWER → OFF

√MAIN POWER LED – Off

DCM 44.6 SCU ←|→ DCM

44.7 Install DCM cover.

C-lk wall 44.8 Insert SCU in stowage pouch.

MCC-H/IV 45. POWERING DOWN UHF 1(2)
PCS If powering off UHF 1
Go to {2.702 UHF 1 ORU DEACTIVATION}, all (SODF: C&T: NOMINAL: UHF).

If powering off UHF 2
Go to {2.704 UHF 2 ORU DEACTIVATION}, all (SODF: C&T: NOMINAL: UHF).

The following procedure should be followed on MCC “Go” to perform a sneakernet transfer of execute package messages from the ISS SSCs to the Shuttle PGSCs. During the docked timeframe, the Shuttle Ku coverage is very limited in the hours before crew wakeup due to ISS blockage. The Shuttle OCA OFFICER will uplink the Shuttle execute package to a Shuttle PCMCIA card (inserted into an ISS SSC) and you (shuttle crew) will move the PCMCIA card to a Shuttle PGSC in the morning and run a batch file to copy the execute package files to their standard location on the KFX PGSC.

Prior to Sleep,

1. Insert a Shuttle "Late Update" PCMCIA card into an ISS SSC (SSC 4 or 6 should be fine, but coordinate with the ISS crew).
2. Verify that KFX is running on that SSC.
3. Inform the MCC which SSC was used.

During sleep,

The MCC will uplink the execute package files to the PCMCIA card in the SSC

At Wakeup,

1. Remove the "Late Update" PCMCIA card from the SSC in the ISS
2. Insert the "Late Update" PCMCIA card into the KFX PGSC in the Shuttle
3. On the KFX PGSC Desktop, double click the "DistributeShuttleUplink.bat" icon. This will copy all of the files from the PCMCIA card to the correct folders on the KFX PGSC.
4. On the KFX Desktop, double click the "Ex Pkg # 2" shortcut to initiate the printing of the messages.